Ref # 108
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631
Misc.
Clearwater N.F 1934

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY

FOREST INSECT INVESTIGATIONS

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STATUS OF THE MOUNTAIN PINE BEETLE INFESTATION OF THE CLEARWATER NATIONAL FOREST AND ADJACENT LANDS 1934

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January 31, 1935

U. S. GOVERNMENT PRINTING OFFICE: 1935 J 76133

Status of the Mountain Pine Beetle Infestation on the
Clearwater National Forest and Adjacent Lands.
1934

An infestation of the mountain pine beetle (Dendroctonus Monticolae) in the lodgepole and white pine stands of the Clearwater National Forest has been known to exist for a number of years. The seriousness of the situation was realized after an extensive examination made by Mr. J. C. Evenden during the summer of 1934, and a more complete survey of the mature timber stands of the forest and private holdings was planned. Accordingly, under a cooperative agreement between the Forest Service and the Clearwater Timber Protective Association, a survey was instituted during the fall of 1934 to determine the full extent of mountain pine beetle infestation. The survey was financed jointly by the Forest Service and the association and supervised directly by the Bureau of Entomology. As this project was conducted late in the season, inclement weather was encountered, which drew from the efficiency of the work.

Tables I and II will show the estimate of the infestations as they were found on different areas of the forest and association holdings.

Table I
Clearwater Forest

Unit	Total acres	N.A. per A.white P.	Total N.A. per acre	Total inf. trees
Mussel Shell	56,832	.043	.046	2,614
Orogrande	27,900	.127	.131	3,654
Cedars	19,712	.257	.326	6,426
Canyon	25,600	.130	.130	3,328
Quarts Cr.	12,544	.035	.035	439
Skull Cr.	6,400	.000	.000	0
Tepee Cr.	6,656	.128	.128	852
Total	155,644			17,313

Clearwater Timber Association

The area administered by the Clearwater Timber Protective Association has been separated into the following units:

Table II

Unit	Total acres	NA per acre White P	NA per acre LPP	Total NA per Acre	Total NA
Mussel Shell	40,192	.104	.079	.183	7,355
Pierce	54,784	.126	.103	.229	12,545
Orogrande	22,272	.246	.000	.246	5,479
Headquarters	76,288	.026	.000	.026	1,983
Washington Cr. (Tepee)	22,016	.136	.197	.333	7,331
Bertha Hill (Canyon)	73,728	.102	.000	.102	7,520
Whisky Cr.	69,120	.000	.047	.047	3,249
Total	358,400				45,462

	Total acres	Total New attack
GRAND TOTAL Forest & Association	514,044	62,775

Of the units listed in Tables I and II, the following nine show a heavy infestation:

Clearwater Forest			Clearwater Association		
Unit	Acres	Inf. trees	Unit	Acres	Inf. trees
Orogrande	27,900	3,654	Mussel Shell	40,192	7,355
Cedars	19,712	6,426	Orogrande	22,272	5,479
Tepee	6,656	852	Pierce	54,784	12,545
Canyon	25,600	3,328	Washington Cr.	22,016	7,331
			Bertha Hill	73,728	7,520
Total	79,868	14,260		212,992	40,230

Grand Total . . . . . 292,860 . . . . . 54,490 trees

The infestation throughout these nine areas is mainly in standing healthy trees with heavy attacks and overwintering broods. Though only one year's data are available, it is rather apparent that the present infestation has a high potential power of increase which can develop to a serious epidemic in a very few years. Unless control is instituted in the spring of 1935, it is believed that a material increase in the infestation can be expected during the

coming season. It has been estimated that the institution of control on these areas would require an expenditure of $400,000 with additional sums for maintenance control over a period of several years. The justification for the institution of the above project must rest upon the timber values at stake, which is a decision to be made by the private and public land managing agencies involved.

Regardless of what action is taken in the spring of 1935, it is strongly recommended that sufficient funds be made available for a thorough survey of the entire area again next year. The data secured by such a survey will permit a proper analysis of the present situation.

The source of the infestation in white pine has been generally considered as originating from the lodgepole pine epidemic, which has spread northward from the Salmon National Forest. During the past few years a large percentage of the lodgepole pine on the Clearwater has been destroyed by this epidemic, and the present situation in white pine has been feared. In 1933 there were six increasing lodgepole pine infestations reported from the St. Joe Forest, indicating that the outbreak had continued its northern spread. This year (1934) there was only one such outbreak reported from the St. Joe which rather contradicted the data of the previous season.

No reason can be given to explain why the lodgepole pine infestation should not spread into the St. Joe, with the same devastating results as have occurred on the Clearwater and Selway. Should such an outbreak occur, then one may assume that in a few years the white pine stands of that forest will be in the same condition as those of the Clearwater are today. On this premise the existing white pine infestation on the Clearwater can hardly be considered as constituting a potential menace to adjecent white pine forests, for if the lodgepole epidemic does not continue in its northern spread, then there is no reason to assume that the white pine infestation would do so.

Respectfully submitted,

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